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Is there preliminary in-vivo evidences of an influence of nonsteroidal antiinflammatory drug treatment on osteoarthritis progression? Part I

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NONSTEROIDAL antiinflammatory drugs (NSAIDs) have not been proven to have a structure (disease) modifying effect. However, there is evidence of negative influence.

—Indomethacin has a negative influence on joint structure;

—potential for any NSAID to provide ‘analgesia’ and allow OA joint overuse.

Hip OA

Rashad *et al.* [1] studied 105 patients comparing indomethacin with azapropazone in patients with OA of the hip. They measured disease progression and the time leading to total hip replacement (THR): surgery was performed in the indomethacin group in 10.3 ± 0.84 months versus azapropazone in 15.6 ± 1.63 months. Joint space narrowing (JSN) was greater in the indomethacin group, i.e., 0.67 mm versus 0.63 mm in the azapropazone group. Critiques of the study included the fact that there were no criteria for the decision for THR, no blinding, and the joint space width measurement was not validated.

Knee OA

Huskinsson *et al.*, in the ‘LINK’ study [2], compared OA knee joint space narrowing in 812 patients with a six-grade scale. This was a sequential, randomized, double blinded trial. There was worsening in 47% of those on indomethacin and 22% on placebo ($P=0.009$), whereas there was worsening in 43% on tiaprofenic acid vs 34% of those on placebo (not significant). However, there were no diagnostic criteria for entry into the

study. Although equal in the different treatment groups, the drop out rate was 46%.

‘Analgesic arthropathy’

This hypothesis has not been validated to date. It is possible that motivation to continue physical activity, such as hard work (e.g., farmers) or physically stressful sports (e.g., football, tennis, running), enhances the risk of hip and knee OA. However, motivation and NSAID use are not analogous, and the course of disease is dissimilar.

Conclusion

To address the issue of an alteration of the evolution of OA, a strict, long and expensive protocol would be needed i.e., a randomized, comparative, 2-3 year trial on patients with OA of the hip or knee. They would exhibit incomplete joint space narrowing. Radiographs would have to be standardized and the method of grading or measuring joint space would be such as described earlier [3].

References

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